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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,161	02/06/2004	D. Ryan Breese	88-2066A	7273

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EXAMINER	
AN, SANG WOOK	
ART UNIT	**PAPER NUMBER**
1732	

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/774,161	BREESE, D. RYAN	
	Examiner	Art Unit	
	Sang W. An	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5/10/04, 6/27/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatfield et al (Journal of Plastic Film & Sheeting) in view of Canham et al (20030120001), Erderly et al (5451450), and applicant's admitted prior art on page 1 of the written description, "Background of Invention."

Regarding claim 1, Hatfield et al teach a method comprising orienting in the machine direction (MD) a polyethylene blown film (abstract) to various draw-down ratios to produce an MD oriented film having a 1% secant MD modulus of 175000-340000 (table 2). However Hatfield et al do not explicitly teach a draw-down ratio greater than 10:1 and a 1% secant MD modulus of 1000000 or greater. Nevertheless, Erderly et al teach that a polyethylene blown film should have a draw-down ratio of 10:1 to 60:1 (col

9 line 3). Furthermore, Canham et al teach that a polyethylene blown film should have 1% secant modulus greater than 800 MPa (par 0178 & 0179). Examiner would like to point out that upon observation of Table 2 of Hatfield et al, as the draw-down ratio increases so does both types of 1% secant modulus, MD & TD. Therefore with this noticeable trend and Erderly et al and Canham et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of invention to use the teachings of Erderly et al and Canham et al in Hatfield et al's method of forming polyethylene films in order to obtain desired material properties such as 1% secant modulus and film thickness.

Regarding claim 2, Canham et al teach that the MD oriented film has a 1%secant transvers-direction (TD) modulus of 300000 psi or greater (par 0179). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use the teachings of Canham et al in Hatfield et al's method of forming polyethylene films in view of Erderly et al in order to obtain desired material properties such as 1% secant modulus and film thickness.

Regarding claims 3-9, the claimed ranges of densities and molecular weights are known properties of polyethylene as also cited in the applicant's background section as prior art under ASTM D4976-98: Standard Specification for Polyethylene Plastic Molding and Extrusion Materials.

Regarding claims 10-13, the claimed ranges of number average molecular weights are known number average molecular weight ranges for polyethylene as evidenced by Sigma-Aldrich's product catalog.

Regarding claim 14, Erderly et al teach that the draw-down ratio is 11:1 or greater (col 9 line 3). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use the teachings of Erderly et al in Hatfield et al's method of forming polyethylene films in view of Canham et al in order to obtain desired material properties such as 1% secant modulus and film thickness.

Regarding claim 15, Canham et al teach oriented film having a 1% secant MD modulus of 1,100,000 psi or greater (par 0179). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use the teachings of Canham et al in Hatfield et al's method of forming polyethylene films in view of Erderly et al in order to obtain desired material properties such as 1% secant modulus and film thickness.

Regarding claims 16-19, these claims are being treated as product by process claims. See MPEP § 2113 and the corresponding rejection from which they depend on. As such the product limitation of an oriented MD film with the claimed 1% secant modulus and the claimed draw-down ratio is obvious as indicated in the rejections above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang W. An whose telephone number is (571) 272-1997. The examiner can normally be reached on Mon-Fri 7 AM - 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on (571) 272-1196. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sang Wook An
Patent Examiner
Art Unit 1732
March 29, 2006

MICHAEL P. COLAIANNI
SUPERVISORY PATENT EXAMINER